

Attorney Docket No.: 5440.204-US

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Kauppinen et al.

Confirmation No: 2264

Serial No.: 09/339,159

Group Art Unit: 1652

Filed: June 24, 1999

Examiner: M. Rao

For: Mannanases

**AMENDMENT AND RESPONSE TO THE ADVISORY ACTION**Commissioner for Patents  
Washington, DC 20231

Sir:

Please amend the above-identified application as follows:

**IN THE CLAIMS:**

Please cancel claims 32-45. Please add new claims 46-73:

46. An isolated mannanase, which is
- (a) a polypeptide encoded by the mannanase encoding part of the DNA sequence cloned into the plasmid present in *Escherichia coli* DSM 12197, or
  - (b) a polypeptide comprising an amino acid sequence of amino acids 33-330 of SEQ ID NO:2, or
  - (c) a polypeptide encoded by a DNA sequence that hybridizes with nucleotides 91-990 or 91-1470 of SEQ ID NO:1 under high stringency conditions, or
  - (d) a polypeptide which has a relative mannanase activity of at least 60% after incubation for 20 minutes at 40° C and any pH in the range of 7.5-10 and an amino acid sequence that is at least 80% homologous with the polypeptide of (a), (b) or (c).
47. The mannanase of claim 46, which is encoded by the mannanase encoding part of the DNA sequence cloned into the plasmid present in *Escherichia coli* DSM 12197.
48. The mannanase of claim 46, which has an amino acid sequence comprising amino acids 32-330.